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# Selected Data

on

# Federal Support to Universities and Colleges: Fiscal Year 1989

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June 1991

Science and Engineering Activities Program
Division of Science Resources Studies
National Science Foundation

COMPLETED

# Selected Data

on

# Federal Support to Universities and Colleges: Fiscal Year 1989

June 1991

Project Officer: Richard Bennof

Science and Engineering Activities Program
Division of Science Resources Studies
National Science Foundation

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## Introduction

The data presented in this summary are derived from the Survey of Federal Support to Universities, Colleges, and Nonprofit Institutions: Fiscal Year 1989, and are being released in advance of the Detailed Statistical Tables publication that contains more comprehensive data.

### Survey Coverage

The 15 Federal agencies surveyed in this report provided virtually all funding for science and engineering (S/E) research and development (R&D) at universities and colleges. The data presented in these tables represent all categories of direct Federal obligations to institutions of higher education in the United States. Therefore, amounts that may be subcontracted to other institutions are included, but funds that may be received by academic institutions via subcontract arrangements from prime contractors are excluded. Amounts for tuition support programs such as Pell grants and Supplemental Educational Opportunity Grants (SEOGs) are included in these figures. Totals exclude loans to individuals, however, such as those related to federally guaranteed student loan programs sponsored by the Department of Education and Federal employee training and development activities.

Obligations represent the amounts for orders placed, contracts awarded, services received, and similar transactions during a given period, regardless of when the funds were appropriated and when future payment of money is required. Obligations differ from expenditures in that funds allocated by Federal agencies during one fiscal year may be expended by the recipient institution either partially or entirely during one or more subsequent years.

### Data Limitations and Relationship of this Survey to the Survey of Federal Funds for Research and Development

Data presented in this report on R&D and R&D plant by agency sometimes conflict significantly with such data presented in the annual NSF survey, Federal Funds for Research and Development, referred to hereafter as the Federal Funds survey. The treatment of interagency transfers explains much of the difference in the totals. Interagency transfers of funds obligated to an academic or nonprofit institution are reported in the Federal Support survey by the agency that actually obligates the funds to the receiving institution. In the Federal Funds reports, however, obligations are reported by the initiating agency. Each of several agencies utilizes personnel from separate internal offices to respond to the two individual surveys, and they frequently collect data from different sources. Data for the Federal Support survey, for example, are generally processed from award files, whereas Federal Funds data are usually derived from agency budget documents.

Respondents from the separate internal offices that participate in the two surveys also frequently differ in their interpretation of the survey questions. The National Institutes of Health, for example, reports its Biomedical Research Support Grants under "general support for science/engineering" in the Federal Support survey but under "research and development" in the Federal Funds survey. Regarding the structure of the surveys themselves, the data presented in this report differ in several ways from those presented in the report on the Federal Funds survey:

1. The two surveys differ in number of agencies involved. In the Federal Support survey, the 15 Federal agencies that obligate virtually all of Federal support to academic R&D collect data on all Federal obligations to institutions of higher education. For the Federal Funds survey, data are gathered on budgets for R&D and R&D plant from all 33 Federal agencies that conduct such programs.

2. The scope of information gathered differs between the two surveys: data collected in the Federal Support survey are on individual academic institutions, whereas those collected in the Federal Funds survey relate to all types of performers and to character of work (basic and applied research and development).

## List of Tables

**Federal Support**


| Table | | Page |
|---|---|---|
| B-1. | Federal obligations to universities and colleges by type of activity: fiscal years 1963-89 | 5 |
| B-3. | Federal obligations to universities and colleges for research and development by detailed field: fiscal years 1982-89 | 6 |
| B-4. | Federal obligations to universities and colleges for research and development by geographic division and State: fiscal years 1982-89 | 7 |
| B-10. | Federal obligations for research & development to the 100 universities and colleges receiving the largest amounts by agency: fiscal year 1989 | 8 |
| C-4. | Federal obligations to universities and colleges by agency and type of activity: fiscal year 1989 | 10 |
| C-7. | Federal obligations to the 100 universities and colleges receiving the largest amounts by type of activity: fiscal year 1989 | 11 |


In the Federal Support survey, FY 1989, information was collected on all institutions of higher education in the United States (about 2,800 institutions, their system offices, and their associated Federally Funded Research and Development Centers (FFRDCs), as well as nonprofit organizations and their associated FFRDCs). For further information, contact Richard Bennof, Science and Engineering Activities Program, National Science Foundation (202) 634-4673.

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Table B-1. -- Federal obligations to universities and colleges by type of activity: fiscal years 1963-89 1/

[Dollars in thousands]

(Page 1 of 1)

| Fiscal year | Total obligations | Academic science/engineering | | | | | | | Non-science/engineering activities |
|---|---|---|---|---|---|---|---|---|---|
| | | Total academic science/engineering | Research and development | R&D plant | Facilities for instruction in science & engineering | Fellowships, traineeships, & training grants | General support for science/engineering | Other science/engineering activities | |
| 1963 ..... | 1,413,015 | 1,328,511 | 829,524 | 105,896 | (2) | (2) | (2) | 393,091 | 84,504 |
| 1964 ..... | 1,624,963 | 1,528,604 | 975,597 | 100,837 | (2) | (2) | (2) | 452,170 | 96,359 |
| 1965 ..... | 2,305,455 | 1,816,171 | 1,094,963 | 126,196 | (2) | (2) | (2) | 595,012 | 489,284 |
| 1966 ..... | 3,009,950 | 2,163,504 | 1,252,146 | 114,767 | (2) | 365,560 | (2) | 431,031 | 846,446 |
| 1967 ..... | 3,317,709 | 2,323,795 | 1,301,242 | 111,309 | (2) | 447,236 | (2) | 464,008 | 993,914 |
| 1968 ..... | 3,386,637 | 2,349,817 | 1,398,305 | 96,148 | (2) | 440,895 | (2) | 414,469 | 1,036,820 |
| 1969 ..... | 3,462,370 | 2,361,399 | 1,474,681 | 54,516 | (2) | 436,270 | (2) | 395,932 | 1,100,971 |
| 1970 ..... | 3,236,612 | 2,187,579 | 1,446,618 | 44,778 | (2) | 429,408 | (2) | 266,775 | 1,049,033 |
| 1971 ..... | 3,498,596 | 2,343,129 | 1,551,391 | 29,942 | 28,729 | 421,029 | 99,669 | 212,369 | 1,155,467 |
| 1972 ..... | 4,144,692 | 2,599,111 | 1,853,085 | 36,917 | 26,341 | 387,888 | 83,288 | 211,592 | 1,545,581 |
| 1973 ..... | 3,839,102 | 2,464,362 | 1,870,690 | 43,338 | 13,372 | 287,210 | 38,964 | 210,788 | 1,374,740 |
| 1974 ..... | 4,480,372 | 2,736,984 | 2,085,204 | 29,009 | 3,506 | 326,600 | 86,974 | 205,691 | 1,743,388 |
| 1975 ..... | 4,547,191 | 2,805,783 | 2,246,088 | 44,787 | 5,026 | 201,273 | 46,353 | 262,256 | 1,741,408 |
| 1976 ..... | 5,402,764 | 2,959,656 | 2,430,970 | 23,899 | 3,210 | 174,871 | 74,483 | 252,223 | 2,443,108 |
| 1977 ..... | 6,489,735 | 3,351,337 | 2,803,017 | 36,471 | 3,282 | 184,671 | 75,928 | 247,968 | 3,138,398 |
| 1978 ..... | 7,471,843 | 3,959,832 | 3,385,770 | 34,328 | 4,906 | 205,925 | 74,398 | 254,505 | 3,512,011 |
| 1979 3/..... | 7,603,908 | 4,472,659 | 3,873,514 | 32,068 | 6,743 | 204,866 | 92,483 | 262,985 | 3,131,249 |
| 1980 ..... | 8,298,804 | 4,790,972 | 4,160,543 | 37,780 | 3,776 | 210,121 | 91,541 | 287,211 | 3,507,832 |
| 1981 3/..... | 8,640,925 | 5,062,856 | 4,410,931 | 27,694 | 4,563 | 205,448 | 92,721 | 321,499 | 3,578,069 |
| 1982 3/..... | 8,776,978 | 5,179,610 | 4,554,475 | 31,200 | 829 | 176,582 | 80,137 | 336,387 | 3,597,368 |
| 1983 3/..... | 9,344,618 | 5,680,631 | 5,024,330 | 37,547 | 2,522 | 189,616 | 94,847 | 331,769 | 3,663,987 |
| 1984 ..... | 10,039,468 | 6,308,014 | 5,448,821 | 49,764 | 1,889 | 194,895 | 112,588 | 500,057 | 3,731,454 |
| 1985 ..... | 10,971,593 | 7,257,862 | 6,246,181 | 113,932 | 4,947 | 253,082 | 119,171 | 520,549 | 3,713,731 |
| 1986 ..... | 11,619,243 | 7,430,872 | 6,456,743 | 105,827 | 4,990 | 246,196 | 111,130 | 505,986 | 4,188,371 |
| 1987 ..... | 13,433,460 | 8,565,441 | 7,241,001 | 229,875 | 13,722 | 290,942 | 236,933 | 552,968 | 4,868,019 |
| 1988 ..... | 14,066,032 | 9,133,458 | 7,719,162 | 202,907 | 13,374 | 309,348 | 171,826 | 716,841 | 4,932,574 |
| 1989 ..... | 15,657,609 | 10,073,144 | 8,516,849 | 237,010 | 16,911 | 340,985 | 200,605 | 760,784 | 5,584,465 |

1/ Note that some trend shifts are related to institutional reclassification. As of 1978, two laboratories that were formerly considered academically administered Federally Funded Research and Development Centers (FFRDCs) became part of their respective institutions: Applied Physics Laboratory (Johns Hopkins University) and Applied Research Laboratory (Pennsylvania State University). Data for these laboratories are thus included in the academic figures for 1978-89, but excluded for prior years. Similarly, Draper Laboratories separated from the Massachusetts Institute of Technology as of fiscal year 1974 to become an independent nonprofit institution; academic data shown for 1963-73 include Draper Laboratories, whereas those for 1974-89 do not.

2/ Not separately identified but included under "other science/engineering activities".

3/ Total and non-science/engineering obligations were estimated based on revised data from the Department of Education.

SOURCE: National Science Foundation/SRS, Federal Support to Universities, Colleges, and Nonprofit Institutions, Fiscal Year 1989

Table B-3. -- Federal obligations to universities and colleges for research and development by detailed field: fiscal years 1982-89

[Dollars in thousands]

(Page 1 of 1)

| Field of science/engineering | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 |
|---|---|---|---|---|---|---|---|---|
| Total, all fields | 4,554,475 | 5,024,330 | 5,448,821 | 6,246,181 | 6,456,743 | 7,241,001 | 7,719,162 | 8,516,849 |
| Engineering, total | 804,054 | 913,604 | 847,674 | 944,413 | 998,312 | 988,461 | 1,129,303 | 1,152,862 |
| Aeronautical | 35,530 | 39,765 | 40,678 | 39,903 | 42,257 | 40,019 | 47,946 | 66,096 |
| Astronautical | 8,569 | 16,373 | 12,405 | 14,765 | 24,147 | 23,474 | 32,516 | 42,276 |
| Chemical | 30,274 | 37,685 | 50,677 | 68,602 | 50,379 | 52,273 | 67,647 | 44,349 |
| Civil | 38,745 | 52,231 | 55,843 | 45,368 | 35,402 | 30,166 | 30,947 | 43,026 |
| Electrical | 139,442 | 170,381 | 161,336 | 231,457 | 212,175 | 197,133 | 251,336 | 240,638 |
| Mechanical | 37,836 | 42,577 | 45,952 | 53,214 | 56,416 | 60,392 | 60,551 | 71,137 |
| Metallurgy & materials | 63,998 | 66,146 | 75,341 | 80,416 | 101,457 | 98,033 | 121,228 | 146,253 |
| Engineering, n.e.c. | 449,660 | 488,446 | 405,442 | 410,688 | 476,079 | 486,971 | 517,132 | 499,087 |
| All sciences, total | 3,750,421 | 4,110,726 | 4,601,147 | 5,301,768 | 5,458,431 | 6,252,540 | 6,589,859 | 7,363,987 |
| Physical sciences, total | 563,440 | 621,410 | 715,948 | 789,184 | 770,254 | 824,643 | 859,764 | 979,037 |
| Astronomy | 54,001 | 62,278 | 78,124 | 78,654 | 78,435 | 84,587 | 89,791 | 103,271 |
| Chemistry | 183,231 | 192,171 | 230,689 | 256,156 | 255,593 | 271,146 | 281,573 | 299,417 |
| Physics | 284,711 | 325,998 | 359,757 | 397,061 | 379,289 | 406,264 | 426,005 | 505,723 |
| Physical sciences, n.e.c. | 41,497 | 40,963 | 47,378 | 57,313 | 56,937 | 62,646 | 62,395 | 70,626 |
| Mathematical/computer sciences, total | 102,531 | 117,540 | 135,103 | 173,314 | 179,096 | 196,711 | 203,641 | 258,035 |
| Mathematical sciences | 55,998 | 63,087 | 75,176 | 94,680 | 96,405 | 116,039 | 119,217 | 134,838 |
| Computer sciences | 44,844 | 52,727 | 58,667 | 78,634 | 79,413 | 77,238 | 81,527 | 119,655 |
| Mathematical/computer sci, n.e.c. 1/ | 1,689 | 1,726 | 1,260 | 0 | 3,278 | 3,434 | 2,897 | 3,542 |
| Environmental sciences, total | 344,313 | 372,236 | 398,538 | 453,789 | 468,882 | 496,444 | 474,695 | 554,917 |
| Atmospheric sciences | 94,463 | 103,851 | 114,183 | 135,562 | 124,657 | 151,294 | 132,379 | 131,959 |
| Geological sciences | 101,005 | 101,570 | 100,901 | 116,850 | 118,401 | 118,662 | 131,913 | 152,449 |
| Oceanography | 102,340 | 120,448 | 136,426 | 138,732 | 121,855 | 150,225 | 129,473 | 163,035 |
| Environmental sciences, n.e.c. | 46,505 | 46,367 | 47,028 | 62,645 | 103,969 | 76,263 | 80,930 | 107,474 |
| Life sciences, total | 2,380,991 | 2,617,274 | 2,932,582 | 3,362,712 | 3,463,114 | 4,035,516 | 4,348,004 | 4,731,546 |
| Biological (excl. env bio) | 1,201,934 | 1,339,982 | 1,548,809 | 1,775,397 | 1,849,516 | 2,180,542 | 2,343,429 | 2,555,864 |
| Environmental biology | 6,432 | 8,073 | 79,449 | 79,601 | 86,088 | 87,628 | 97,126 | 108,584 |
| Agricultural | 160,985 | 167,274 | 154,759 | 168,927 | 143,249 | 149,484 | 155,772 | 180,908 |
| Medical | 970,476 | 1,053,364 | 1,124,788 | 1,294,571 | 1,325,157 | 1,546,711 | 1,691,610 | 1,832,451 |
| Life sciences, n.e.c. | 41,164 | 48,581 | 24,777 | 44,216 | 59,104 | 71,151 | 60,067 | 53,739 |
| Psychology, total | 84,406 | 93,849 | 109,787 | 132,746 | 138,338 | 176,524 | 186,924 | 209,344 |
| Biological aspects | 24,735 | 24,760 | 33,515 | 39,700 | 39,049 | 46,194 | 53,287 | 66,959 |
| Social aspects | 25,166 | 27,787 | 30,261 | 36,205 | 38,589 | 51,557 | 52,113 | 59,502 |
| Psychology, n.e.c. | 34,505 | 41,302 | 46,011 | 56,841 | 60,700 | 78,773 | 81,524 | 82,883 |
| Social sciences, total | 134,323 | 175,127 | 162,492 | 175,909 | 172,148 | 170,427 | 184,539 | 215,404 |
| Anthropology | 11,994 | 12,678 | 5,529 | 6,053 | 6,455 | 6,998 | 5,972 | 7,054 |
| Economics | 52,382 | 52,756 | 37,675 | 45,292 | 43,764 | 51,274 | 48,039 | 51,806 |
| History | 3,200 | 4,623 | 1,038 | 1,494 | 1,508 | 1,634 | 1,527 | 1,665 |
| Linguistics | 3,629 | 3,419 | 2,967 | 3,196 | 2,481 | 2,843 | 3,248 | 3,402 |
| Political science | 10,681 | 17,149 | 7,965 | 6,216 | 5,003 | 5,492 | 5,926 | 6,988 |
| Sociology | 21,142 | 29,890 | 33,232 | 34,887 | 34,580 | 41,797 | 55,204 | 75,404 |
| Social sciences, n.e.c. | 31,295 | 54,612 | 74,086 | 78,771 | 78,357 | 60,389 | 64,623 | 69,085 |
| Other sciences, n.e.c. | 140,417 | 113,290 | 146,697 | 214,114 | 266,599 | 352,275 | 332,292 | 415,704 |

1/ Data not collected in FY 1985. Included under "mathematical sciences."

n.e.c. = Not elsewhere classified.

NOTE: Data for each year reflect support from the agencies included in the survey system for that year.

SOURCE: National Science Foundation/SRS, Federal Support to Universities, Colleges, and Nonprofit Institutions, Fiscal Year 1989

Table B-4. -- Federal obligations to universities and colleges for research and development by geographic division and State: fiscal years 1982-89

[Dollars in thousands]

(Page 1 of 1)

| Geographic division and State | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 |
|---|---|---|---|---|---|---|---|---|
| United States, total | 4,554,475 | 5,024,330 | 5,448,821 | 6,246,181 | 6,456,743 | 7,241,001 | 7,719,162 | 8,516,849 |
| New England, total | 546,699 | 614,331 | 666,700 | 737,777 | 757,600 | 819,318 | 840,017 | 943,066 |
| Connecticut | 106,116 | 116,971 | 128,786 | 144,455 | 146,545 | 174,433 | 175,972 | 188,744 |
| Maine | 5,409 | 6,476 | 7,999 | 7,166 | 6,449 | 8,518 | 6,618 | 9,090 |
| Massachusetts | 373,011 | 424,213 | 453,875 | 496,981 | 508,166 | 536,955 | 545,068 | 629,070 |
| New Hampshire | 16,958 | 19,436 | 22,409 | 27,750 | 30,564 | 34,573 | 36,766 | 37,007 |
| Rhode Island | 32,156 | 33,879 | 35,219 | 42,131 | 43,646 | 40,731 | 47,349 | 49,525 |
| Vermont | 13,049 | 13,356 | 18,412 | 19,294 | 22,230 | 24,108 | 28,244 | 29,630 |
| Middle Atlantic, total | 758,311 | 863,889 | 941,878 | 1,108,296 | 1,131,083 | 1,268,422 | 1,352,552 | 1,448,888 |
| New Jersey | 56,207 | 61,998 | 71,331 | 83,023 | 86,000 | 97,785 | 104,853 | 120,772 |
| New York | 465,860 | 527,872 | 581,251 | 680,273 | 671,899 | 752,897 | 795,186 | 843,497 |
| Pennsylvania | 236,244 | 274,019 | 289,296 | 345,000 | 373,184 | 417,740 | 452,513 | 484,619 |
| East North Central, total | 629,295 | 682,781 | 747,405 | 862,892 | 873,904 | 982,023 | 1,018,935 | 1,139,209 |
| Illinois | 190,913 | 209,434 | 226,377 | 260,394 | 262,640 | 297,266 | 301,297 | 324,405 |
| Indiana | 76,181 | 77,043 | 87,369 | 101,734 | 100,144 | 111,184 | 111,779 | 131,315 |
| Michigan | 133,673 | 144,557 | 157,889 | 178,920 | 183,814 | 213,474 | 233,121 | 259,265 |
| Ohio | 129,207 | 138,882 | 148,999 | 171,831 | 179,050 | 199,011 | 210,593 | 238,131 |
| Wisconsin | 99,321 | 112,865 | 126,771 | 150,013 | 148,256 | 161,088 | 162,145 | 186,093 |
| West North Central, total | 261,280 | 267,621 | 309,033 | 359,097 | 360,139 | 410,069 | 428,857 | 472,065 |
| Iowa | 47,898 | 53,229 | 61,933 | 69,926 | 74,279 | 81,722 | 89,074 | 103,214 |
| Kansas | 24,678 | 24,765 | 25,845 | 31,198 | 33,239 | 35,863 | 37,228 | 39,105 |
| Minnesota | 79,582 | 74,279 | 85,132 | 104,471 | 102,293 | 121,588 | 123,621 | 133,439 |
| Missouri | 80,978 | 86,389 | 94,072 | 108,629 | 111,289 | 129,483 | 137,276 | 150,269 |
| Nebraska | 15,572 | 14,714 | 23,816 | 26,979 | 24,524 | 28,464 | 25,763 | 27,462 |
| North Dakota | 7,685 | 10,031 | 13,534 | 12,625 | 9,479 | 8,109 | 11,044 | 11,715 |
| South Dakota | 4,887 | 4,214 | 4,701 | 5,269 | 5,036 | 4,840 | 4,851 | 6,861 |
| South Atlantic, total | 817,109 | 884,524 | 866,760 | 1,005,463 | 1,066,480 | 1,217,674 | 1,385,893 | 1,476,995 |
| Delaware | 8,191 | 9,230 | 10,123 | 12,221 | 12,863 | 12,067 | 15,261 | 16,333 |
| District of Columbia | 42,472 | 54,379 | 46,096 | 56,320 | 49,955 | 61,057 | 72,668 | 69,206 |
| Florida | 84,924 | 90,328 | 91,555 | 113,479 | 121,231 | 148,757 | 185,626 | 196,397 |
| Georgia | 90,891 | 101,043 | 98,686 | 118,087 | 127,973 | 144,034 | 166,914 | 183,001 |
| Maryland | 366,789 | 377,480 | 346,321 | 375,086 | 415,943 | 460,057 | 522,341 | 514,747 |
| North Carolina | 125,749 | 141,393 | 155,208 | 184,060 | 194,999 | 228,096 | 246,688 | 287,838 |
| South Carolina | 21,801 | 23,900 | 24,424 | 33,188 | 32,726 | 33,516 | 35,595 | 38,927 |
| Virginia | 67,997 | 78,055 | 83,272 | 103,168 | 101,082 | 118,161 | 126,596 | 155,454 |
| West Virginia | 8,295 | 8,716 | 11,075 | 9,854 | 9,708 | 11,929 | 14,204 | 15,092 |
| East South Central, total | 142,906 | 158,205 | 165,738 | 205,350 | 219,146 | 270,537 | 290,579 | 311,109 |
| Alabama | 45,746 | 53,565 | 60,489 | 70,944 | 79,921 | 100,553 | 106,502 | 123,373 |
| Kentucky | 20,526 | 19,211 | 21,281 | 27,186 | 27,974 | 30,721 | 31,965 | 36,140 |
| Mississippi | 18,207 | 18,659 | 18,103 | 25,150 | 22,979 | 31,825 | 37,891 | 36,227 |
| Tennessee | 58,427 | 66,770 | 65,865 | 82,070 | 88,272 | 107,438 | 114,221 | 115,369 |
| West South Central, total | 300,567 | 318,708 | 356,507 | 420,655 | 434,494 | 485,424 | 517,088 | 590,849 |
| Arkansas | 11,112 | 10,411 | 11,935 | 15,323 | 14,527 | 15,487 | 15,599 | 19,643 |
| Louisiana | 34,475 | 36,213 | 40,098 | 51,373 | 47,715 | 59,619 | 61,456 | 100,418 |
| Oklahoma | 22,795 | 21,429 | 24,010 | 27,880 | 29,468 | 32,215 | 25,495 | 30,968 |
| Texas | 232,185 | 250,655 | 280,464 | 326,079 | 342,784 | 378,103 | 414,538 | 439,820 |
| Mountain, total | 253,635 | 276,696 | 328,684 | 345,949 | 366,578 | 392,342 | 412,334 | 478,171 |
| Arizona | 43,431 | 49,004 | 54,295 | 64,672 | 65,808 | 80,345 | 83,490 | 103,319 |
| Colorado | 77,139 | 83,570 | 97,761 | 104,640 | 108,473 | 129,826 | 145,900 | 147,301 |
| Idaho | 4,834 | 5,211 | 15,765 | 5,757 | 5,296 | 6,998 | 8,647 | 10,424 |
| Montana | 7,445 | 6,823 | 7,014 | 6,549 | 8,015 | 8,766 | 8,554 | 10,414 |
| Nevada | 7,644 | 7,875 | 7,299 | 10,189 | 10,895 | 14,955 | 13,856 | 14,113 |
| New Mexico | 47,944 | 53,631 | 65,427 | 60,630 | 79,466 | 55,058 | 56,163 | 74,134 |
| Utah | 58,129 | 59,164 | 65,774 | 76,557 | 81,627 | 86,950 | 86,648 | 108,117 |
| Wyoming | 7,069 | 11,418 | 15,349 | 16,955 | 6,998 | 9,444 | 9,076 | 10,349 |
| Pacific, total | 833,086 | 945,737 | 1,055,852 | 1,188,994 | 1,234,207 | 1,379,461 | 1,457,359 | 1,636,624 |
| Alaska | 11,206 | 8,196 | 10,611 | 12,214 | 14,645 | 15,373 | 15,928 | 15,111 |
| California | 628,001 | 724,147 | 793,609 | 908,141 | 953,989 | 1,057,440 | 1,109,851 | 1,258,964 |
| Hawaii | 24,493 | 25,860 | 24,691 | 33,656 | 29,196 | 39,410 | 39,651 | 47,913 |
| Oregon | 55,685 | 56,810 | 72,618 | 70,068 | 71,764 | 84,038 | 91,133 | 90,171 |
| Washington | 113,701 | 130,724 | 154,323 | 164,915 | 164,613 | 183,200 | 200,796 | 224,465 |
| Outlying areas, total | 11,587 | 11,838 | 10,264 | 11,708 | 13,112 | 15,731 | 15,548 | 19,873 |
| Guam | 987 | 1,080 | 1,038 | 1,138 | 1,165 | 1,107 | 1,096 | 1,193 |
| Puerto Rico | 8,576 | 8,496 | 8,337 | 9,045 | 10,268 | 12,678 | 12,354 | 16,561 |
| American Samoa | 555 | 584 | 200 | 115 | 290 | 340 | 365 | 290 |
| Virgin Islands | 890 | 1,067 | 599 | 931 | 916 | 1,026 | 1,091 | 1,052 |
| Trust Territory Pac Isl | 579 | 611 | 90 | 479 | 473 | 580 | 642 | 777 |

NOTE: Data for each year reflect support from the agencies included in the survey system for that year.

SOURCE: National Science Foundation/SRS, Federal Support to Universities, Colleges, and Nonprofit Institutions, Fiscal Year 1989

Table B-10. -- Federal obligations for research & development to the 100 universities and colleges receiving the largest amounts by agency: fiscal year 1989 1/

[Dollars in Thousands]

(Page 1 of 2)

| Rank | Institution (ranked by amount received) | Total | USDA | Com | DOD | Ed | DOE | EPA | HHS | Int | NASA | NSF | Other 2/ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total, all institutions | 8,516,849 | 336,036 | 66,041 | 1,220,606 | 67,044 | 444,499 | 77,503 | 4,512,022 | 52,828 | 435,702 | 1,206,568 | 98,000 |
| 1 | Johns Hopkins University | 411,879 | 48 | 91 | 203,192 | 2,329 | 1,801 | 324 | 179,513 | 0 | 4,435 | 9,314 | 10,832 |
| 2 | Stanford University | 239,847 | 710 | 48 | 39,635 | 996 | 15,735 | 3,368 | 110,960 | 119 | 41,225 | 27,051 | 0 |
| 3 | Mass Inst of Technology | 207,157 | 0 | 50 | 42,287 | 657 | 49,277 | 381 | 50,676 | 485 | 19,225 | 41,304 | 2,815 |
| 4 | University of Washington | 203,691 | 2,207 | 1,903 | 27,559 | 1,545 | 6,491 | 930 | 130,242 | 854 | 3,941 | 27,036 | 983 |
| 5 | Univ of Cal Los Angeles | 170,839 | 160 | 53 | 10,709 | 1,336 | 17,667 | 540 | 115,049 | 75 | 6,084 | 19,078 | 88 |
| 6 | University of Michigan | 167,865 | 1,338 | 3,085 | 11,372 | 424 | 8,021 | 3,249 | 105,926 | 0 | 11,856 | 20,147 | 2,447 |
| 7 | Univ of Cal San Diego | 166,601 | 470 | 2,897 | 29,101 | 0 | 3,229 | 0 | 87,243 | 291 | 11,946 | 31,424 | 0 |
| 8 | Univ of Cal San Francisco | 159,027 | 0 | 0 | 2,037 | 0 | 3,306 | 175 | 150,222 | 0 | 1,283 | 1,943 | 61 |
| 9 | Univ of Wis-Madison | 150,474 | 7,320 | 125 | 8,902 | 0 | 13,446 | 574 | 83,984 | 272 | 9,218 | 25,656 | 977 |
| 10 | Columbia Univ Main Div | 150,263 | 0 | 0 | 11,464 | 123 | 6,373 | 49 | 99,506 | 908 | 3,872 | 25,807 | 2,161 |
| | Total 1st 10 institutions | 2,027,643 | 12,253 | 8,252 | 386,258 | 7,410 | 125,346 | 9,590 | 1,113,321 | 3,004 | 113,085 | 228,760 | 20,364 |
| 11 | Yale University | 146,245 | 47 | 30 | 7,999 | 0 | 9,588 | 303 | 117,552 | 0 | 868 | 9,858 | 0 |
| 12 | Harvard University | 141,760 | 0 | 0 | 7,396 | 500 | 4,459 | 800 | 99,634 | 77 | 4,404 | 18,384 | 6,106 |
| 13 | Cornell University | 139,954 | 9,449 | 0 | 15,151 | 0 | 4,169 | 835 | 65,826 | 346 | 5,120 | 38,602 | 456 |
| 14 | Univ of Pennsylvania | 132,805 | 1,259 | 0 | 8,054 | 330 | 6,383 | 0 | 100,388 | 0 | 459 | 15,500 | 432 |
| 15 | Univ of Cal Berkeley | 131,070 | 8,872 | 734 | 12,701 | 6,923 | 4,206 | 400 | 38,361 | 446 | 24,219 | 32,522 | 1,686 |
| 16 | University of Minnesota | 128,727 | 6,764 | 30 | 5,068 | 0 | 5,202 | 561 | 88,985 | 671 | 2,585 | 18,793 | 68 |
| 17 | Pennsylvania State Univ | 119,435 | 8,170 | 353 | 51,102 | 0 | 4,417 | 644 | 25,943 | 5,670 | 8,208 | 13,385 | 1,543 |
| 18 | Univ of Southern Cal | 114,766 | 0 | 0 | 33,945 | 162 | 1,532 | 72 | 61,524 | 175 | 5,290 | 11,516 | 550 |
| 19 | Duke University | 108,611 | 276 | 0 | 6,031 | 0 | 3,514 | 2,081 | 86,376 | 0 | 691 | 9,642 | 0 |
| 20 | Washington University | 102,974 | 150 | 0 | 1,559 | 0 | 1,485 | 75 | 91,827 | 0 | 2,789 | 5,089 | 0 |
| | Total 1st 20 institutions | 3,293,990 | 47,240 | 9,399 | 535,264 | 15,325 | 170,301 | 15,361 | 1,889,737 | 10,389 | 167,718 | 402,051 | 31,205 |
| 21 | University of Colorado | 101,345 | 0 | 2,108 | 5,679 | 198 | 3,928 | 494 | 56,156 | 667 | 12,919 | 19,143 | 53 |
| 22 | Univ of Ill Urbana | 100,062 | 7,104 | 117 | 18,694 | 0 | 10,958 | 1,646 | 16,509 | 431 | 3,506 | 38,527 | 2,570 |
| 23 | University of Rochester | 98,550 | 0 | 0 | 6,720 | 0 | 17,079 | 0 | 67,445 | 0 | 195 | 7,111 | 0 |
| 24 | Univ of NC at Chapel Hill | 93,244 | 240 | 205 | 3,605 | 0 | 877 | 2,567 | 78,092 | 0 | 614 | 7,044 | 0 |
| 25 | University of Pittsburgh | 91,094 | 100 | 163 | 4,202 | 2,542 | 2,002 | 1,113 | 72,941 | 0 | 652 | 7,379 | 0 |
| 26 | University of Chicago | 90,611 | 284 | 67 | 2,346 | 0 | 4,315 | 24 | 60,473 | 0 | 5,558 | 17,544 | 0 |
| 27 | Univ of Texas at Austin | 84,619 | 260 | 0 | 33,073 | 0 | 16,367 | 350 | 12,585 | 458 | 6,294 | 13,943 | 1,289 |
| 28 | University of Arizona | 82,913 | 3,829 | 142 | 8,475 | 895 | 1,741 | 573 | 37,565 | 1,281 | 15,729 | 11,623 | 1,060 |
| 29 | New York University | 77,761 | 0 | 0 | 4,184 | 101 | 4,408 | 497 | 58,865 | 0 | 557 | 5,324 | 3,825 |
| 30 | University of Iowa | 76,059 | 100 | 126 | 2,637 | 298 | 431 | 598 | 56,148 | 0 | 12,410 | 3,311 | 0 |
| | Total 1st 30 institutions | 4,190,248 | 59,157 | 12,327 | 624,879 | 19,359 | 232,407 | 23,223 | 2,406,516 | 13,226 | 226,152 | 533,000 | 40,002 |
| 31 | Ohio State University | 72,702 | 7,805 | 654 | 4,942 | 0 | 3,410 | 420 | 30,021 | 402 | 5,324 | 12,304 | 7,420 |
| 32 | Univ Alabama Birmingham | 70,702 | 100 | 15 | 1,279 | 897 | 0 | 0 | 63,293 | 0 | 2,659 | 2,459 | 0 |
| 33 | Case Western Reserve Univ | 69,589 | 0 | 56 | 3,602 | 500 | 510 | 0 | 53,014 | 0 | 6,340 | 4,887 | 680 |
| 34 | Baylor Col of Medicine | 69,499 | 7,040 | 0 | 1,047 | 952 | 341 | 0 | 59,452 | 0 | 667 | 0 | 0 |
| 35 | California Inst of Tech | 69,335 | 0 | 86 | 14,423 | 0 | 9,353 | 274 | 12,633 | 948 | 7,286 | 24,332 | 0 |
| 36 | Yeshiva University | 68,553 | 0 | 0 | 176 | 1,209 | 0 | 0 | 66,774 | 0 | 0 | 394 | 0 |
| 37 | Woods Hole Ocngrphic Inst | 67,289 | 0 | 3,481 | 38,365 | 0 | 428 | 0 | 410 | 0 | 204 | 24,401 | 0 |
| 38 | University of Massachuset | 67,183 | 2,900 | 66 | 11,894 | 254 | 1,530 | 323 | 36,356 | 208 | 1,186 | 12,466 | 0 |
| 39 | Vanderbilt University | 63,978 | 45 | 0 | 1,390 | 1,542 | 542 | 0 | 53,971 | 0 | 2,634 | 3,854 | 0 |
| 40 | Purdue University | 62,751 | 7,738 | 0 | 7,306 | 146 | 5,017 | 545 | 18,401 | 384 | 3,127 | 16,275 | 3,812 |
| | Total 1st 40 institutions | 4,871,829 | 84,785 | 16,685 | 709,303 | 24,859 | 253,538 | 24,785 | 2,800,841 | 15,168 | 255,579 | 634,372 | 51,914 |
| 41 | University of Utah | 61,361 | 180 | 0 | 4,426 | 87 | 4,188 | 110 | 42,840 | 1,056 | 796 | 7,393 | 285 |
| 42 | Georgia Institute of Tech | 60,949 | 15 | 402 | 43,610 | 0 | 1,264 | 440 | 3,751 | 288 | 5,404 | 5,690 | 85 |
| 43 | Univ of MD College Park | 60,252 | 3,893 | 872 | 11,738 | 1,795 | 6,510 | 3,430 | 5,205 | 0 | 9,537 | 16,167 | 1,105 |
| 44 | University of Miami | 60,135 | 0 | 46 | 4,702 | 490 | 293 | 0 | 45,610 | 0 | 1,142 | 7,852 | 0 |
| 45 | Univ of Cal Davis | 60,100 | 3,068 | 111 | 1,803 | 858 | 5,211 | 280 | 38,980 | 362 | 1,430 | 6,037 | 1,960 |
| 46 | Boston University | 60,029 | 0 | 39 | 5,689 | 114 | 1,648 | 90 | 44,966 | 13 | 1,519 | 5,951 | 0 |
| 47 | University of Florida | 58,696 | 7,077 | 1,945 | 6,939 | 83 | 3,074 | 599 | 28,099 | 769 | 1,415 | 7,593 | 1,103 |
| 48 | Carnegie-Mellon Univ | 57,605 | 0 | 27 | 26,666 | 0 | 3,765 | 340 | 6,952 | 446 | 3,543 | 15,866 | 0 |
| 49 | Northwestern University | 57,494 | 60 | 91 | 4,207 | 1,432 | 3,710 | 0 | 34,753 | 47 | 1,104 | 12,005 | 85 |
| 50 | Indiana University | 55,449 | 32 | 0 | 725 | 42 | 2,712 | 312 | 34,528 | 100 | 471 | 16,527 | 0 |
| | Total 1st 50 institutions | 5,463,899 | 99,110 | 20,218 | 819,808 | 29,760 | 285,913 | 30,386 | 3,086,525 | 18,249 | 281,940 | 735,453 | 56,537 |

(Continued)

See explanatory material at end of table.

Table B-10. -- Federal obligations for research & development to the 100 universities and colleges receiving the largest amounts by agency: fiscal year 1989 1/

[Dollars in Thousands]

(Page 2 of 2)

| Rank | Institution (ranked by amount received) | Total | USDA | Com | DOD | Ed | DOE | EPA | HHS | Int | NASA | NSF | Other 2/ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 51 | Michigan State University | 54,382 | 10,295 | 85 | 1,620 | 2,007 | 3,524 | 417 | 15,275 | 200 | 499 | 18,073 | 2,387 |
| 52 | University of Virginia | 51,990 | 28 | 478 | 4,271 | 1,226 | 2,182 | 286 | 33,360 | 9 | 3,199 | 6,743 | 208 |
| 53 | U Tex Sw Med Ctr - Dallas | 48,591 | 0 | 0 | 190 | 0 | 0 | 0 | 46,789 | 0 | 1,080 | 532 | 0 |
| 54 | Univ of Cal Irvine | 47,303 | 296 | 57 | 4,386 | 0 | 3,729 | 320 | 29,734 | 0 | 1,249 | 7,532 | 0 |
| 55 | Princeton University | 47,037 | 0 | 30 | 9,169 | 0 | 5,311 | 265 | 12,245 | 360 | 3,500 | 16,157 | 0 |
| 56 | Tulane University | 46,873 | 0 | 0 | 26,344 | 0 | 0 | 90 | 18,115 | 0 | 102 | 667 | 1,555 |
| 57 | Emory University | 45,840 | 0 | 0 | 1,239 | 326 | 99 | 0 | 42,238 | 0 | 285 | 1,653 | 0 |
| 58 | University of Georgia | 45,627 | 7,034 | 1,065 | 632 | 0 | 15,941 | 1,163 | 11,002 | 443 | 623 | 6,449 | 1,275 |
| 59 | Texas A & M University | 44,928 | 8,735 | 2,043 | 6,478 | 0 | 4,210 | 143 | 7,617 | 393 | 3,739 | 11,405 | 165 |
| 60 | New Mexico State Univ | 44,210 | 2,534 | 0 | 18,001 | 0 | 1,136 | 0 | 757 | 394 | 19,410 | 1,978 | 0 |
| Total 1st | 60 institutions | 5,940,680 | 128,032 | 23,976 | 892,138 | 33,319 | 322,045 | 33,070 | 3,303,657 | 20,048 | 315,626 | 806,642 | 62,127 |
| 61 | N C State Univ at Raleigh | 43,466 | 8,667 | 1,340 | 7,384 | 500 | 1,671 | 2,771 | 4,459 | 391 | 3,647 | 8,895 | 3,741 |
| 62 | Univ of Ill Chicago | 43,271 | 65 | 50 | 4,942 | 623 | 762 | 318 | 30,986 | 0 | 258 | 5,267 | 0 |
| 63 | Utah State University | 43,219 | 2,848 | 0 | 31,950 | 490 | 1,061 | 831 | 1,966 | 901 | 824 | 1,972 | 376 |
| 64 | Virginia Commonwlth Univ | 42,684 | 0 | 0 | 1,405 | 1,796 | 187 | 180 | 37,789 | 0 | 477 | 850 | 0 |
| 65 | Oregon State University | 42,562 | 8,229 | 2,482 | 6,225 | 0 | 1,271 | 1,392 | 7,291 | 1,325 | 1,988 | 11,487 | 872 |
| 66 | SUNY at Stony Brook | 41,251 | 0 | 0 | 356 | 0 | 3,429 | 0 | 23,880 | 54 | 1,182 | 12,350 | 0 |
| 67 | University of Cincinnati | 40,996 | 203 | 260 | 2,639 | 0 | 516 | 870 | 32,427 | 0 | 1,879 | 2,202 | 0 |
| 68 | Mt Sinai Sch of Medicine | 40,873 | 0 | 0 | 0 | 291 | 256 | 144 | 39,572 | 0 | 312 | 298 | 0 |
| 69 | University of Connecticut | 39,761 | 1,537 | 3,346 | 3,079 | 0 | 477 | 586 | 26,342 | 150 | 172 | 4,072 | 0 |
| 70 | Louisiana State Univ | 39,088 | 4,252 | 383 | 2,385 | 0 | 2,837 | 948 | 21,959 | 484 | 685 | 5,155 | 0 |
| Total 1st | 70 institutions | 6,357,851 | 153,833 | 31,837 | 952,503 | 37,019 | 334,512 | 41,110 | 3,530,328 | 23,353 | 327,050 | 859,190 | 67,116 |
| 71 | Tufts University | 38,566 | 11,345 | 0 | 382 | 0 | 1,039 | 3,642 | 19,976 | 0 | 5 | 1,721 | 456 |
| 72 | Univ of Cal Santa Barbara | 37,444 | 180 | 122 | 13,247 | 271 | 3,166 | 406 | 4,082 | 385 | 1,126 | 13,405 | 1,054 |
| 73 | Univ of Hawaii-Manoa | 36,693 | 3,483 | 0 | 2,666 | 0 | 1,659 | 0 | 9,136 | 0 | 5,529 | 12,156 | 2,064 |
| 74 | Rutgers the St Univ of NJ | 36,241 | 3,965 | 72 | 2,838 | 1,337 | 637 | 283 | 14,961 | 156 | 169 | 11,427 | 396 |
| 75 | Colorado State University | 36,120 | 6,232 | 0 | 4,684 | 121 | 1,149 | 325 | 13,604 | 533 | 1,299 | 7,913 | 260 |
| 76 | Rockefeller University | 35,586 | 0 | 0 | 0 | 0 | 1,245 | 357 | 33,003 | 0 | 0 | 981 | 0 |
| 77 | Univ of MD Balt Prof Sch | 34,648 | 0 | 0 | 2,520 | 0 | 0 | 10 | 31,461 | 0 | 0 | 657 | 0 |
| 78 | VA Polytech Inst & St U | 34,585 | 5,397 | 50 | 6,363 | 0 | 7,269 | 1,139 | 2,540 | 2,369 | 3,880 | 5,054 | 524 |
| 79 | SUNY at Buffalo All Cmps | 33,934 | 0 | 0 | 1,909 | 0 | 543 | 0 | 25,888 | 0 | 1,237 | 4,357 | 0 |
| 80 | Brown University | 33,000 | 0 | 98 | 7,272 | 0 | 2,640 | 0 | 13,383 | 216 | 1,319 | 8,072 | 0 |
| Total 1st | 80 institutions | 6,714,668 | 184,435 | 32,179 | 994,384 | 38,748 | 353,859 | 47,272 | 3,698,362 | 27,012 | 341,614 | 924,933 | 71,870 |
| 81 | Univ of Med & Dent of N J | 32,369 | 215 | 0 | 914 | 0 | 185 | 359 | 29,976 | 0 | 163 | 557 | 0 |
| 82 | U Tex Hlth Sci Ctr S Anto | 31,534 | 0 | 0 | 102 | 0 | 0 | 0 | 30,711 | 0 | 44 | 677 | 0 |
| 83 | Univ of VT & St Agric Col | 29,351 | 3,061 | 0 | 173 | 1,194 | 314 | 238 | 22,753 | 150 | 0 | 1,468 | 0 |
| 84 | U Tex Hlth Sci Ctr Houstn | 28,591 | 0 | 0 | 0 | 0 | 73 | 186 | 27,687 | 0 | 563 | 82 | 0 |
| 85 | Florida State University | 28,021 | 0 | 335 | 1,422 | 0 | 13,745 | 491 | 3,881 | 0 | 1,238 | 6,368 | 541 |
| 86 | U TX MD Anderson Cncr Ctr | 27,772 | 0 | 0 | 0 | 0 | 0 | 0 | 27,514 | 0 | 0 | 258 | 0 |
| 87 | University of Kentucky | 27,349 | 6,336 | 30 | 900 | 95 | 1,935 | 210 | 14,481 | 470 | 178 | 2,664 | 50 |
| 88 | Wake Forest University | 27,314 | 0 | 0 | 0 | 0 | 40 | 0 | 26,434 | 0 | 299 | 541 | 0 |
| 89 | Wayne State University | 26,945 | 0 | 0 | 1,314 | 0 | 283 | 0 | 22,661 | 105 | 123 | 2,405 | 54 |
| 90 | Iowa St U of Sci & Tech | 25,987 | 11,410 | 2,628 | 993 | 0 | 777 | 259 | 4,337 | 540 | 606 | 3,828 | 609 |
| Total 1st | 90 institutions | 6,999,901 | 205,457 | 35,172 | 1,000,202 | 40,037 | 371,211 | 49,015 | 3,908,797 | 28,277 | 344,828 | 943,781 | 73,124 |
| 91 | University of New Mexico | 24,835 | 40 | 0 | 10,516 | 605 | 643 | 0 | 8,518 | 0 | 1,270 | 3,243 | 0 |
| 92 | Georgetown University | 24,728 | 367 | 38 | 891 | 666 | 300 | 416 | 19,193 | 0 | 0 | 1,307 | 1,550 |
| 93 | Dartmouth College | 24,065 | 306 | 0 | 1,753 | 0 | 557 | 162 | 18,542 | 10 | 349 | 2,386 | 0 |
| 94 | University of Kansas | 23,380 | 0 | 49 | 1,139 | 2,457 | 382 | 61 | 15,564 | 48 | 877 | 2,793 | 10 |
| 95 | Oregon Hlth Sciences Univ | 23,231 | 0 | 0 | 336 | 0 | 0 | 0 | 22,648 | 0 | 70 | 177 | 0 |
| 96 | U Tex Med Brnch Galveston | 23,096 | 0 | 0 | 669 | 0 | 0 | 185 | 21,757 | 0 | 396 | 89 | 0 |
| 97 | Univ of Missouri Columbia | 23,042 | 5,787 | 0 | 483 | 0 | 802 | 212 | 11,409 | 299 | 223 | 1,909 | 1,918 |
| 98 | Temple University | 22,929 | 230 | 0 | 675 | 259 | 610 | 23 | 19,821 | 0 | 45 | 1,266 | 0 |
| 99 | George Washington Univ | 22,730 | 6 | 84 | 1,961 | 50 | 718 | 0 | 16,395 | 0 | 2,362 | 1,046 | 108 |
| 100 | University of Dayton | 21,576 | 0 | 0 | 21,042 | 0 | 0 | 200 | 0 | 0 | 58 | 213 | 63 |
| Total 1st | 100 institutions | 7,233,513 | 212,193 | 35,343 | 1,039,667 | 44,074 | 375,223 | 50,274 | 4,062,644 | 28,634 | 350,478 | 958,210 | 76,773 |

1/ Does not include R&D obligations to university-administered FFRDCs.

2/ Includes DOT, AID, HUD, Labor, and NRC.

SOURCE: National Science Foundation/SRS, Federal Support to Universities, Colleges, and Nonprofit Institutions, Fiscal Year 1989

Table C-4. -- Federal obligations to universities and colleges by agency and type of activity: Fiscal Year 1989

[Dollars in thousands]

(Page 1 of 1)

| Agency | Total obligations | Academic science/engineering | | | | | | | Non-science/engineering activities |
|---|---|---|---|---|---|---|---|---|---|
| | | Total academic science/engineering | Research and development | R&D plant | Facilities for instruction in science & engineering | Fellowships, traineeships, & training grants | General support for science/engineering | Other science/engineering activities | |
| Total | 15,657,609 | 10,073,144 | 8,516,849 | 237,010 | 16,911 | 340,985 | 200,605 | 760,784 | 5,584,465 |
| Department of Agriculture | 728,568 | 721,675 | 336,036 | 31,098 | 0 | 4,647 | 0 | 349,894 | 6,893 |
| Department of Commerce | 81,360 | 73,992 | 66,041 | 1,232 | 1,631 | 1,240 | 0 | 3,848 | 7,368 |
| Department of Defense, Total | 1,487,732 | 1,486,428 | 1,220,606 | 57,883 | 0 | 69 | 1,779 | 206,091 | 1,304 |
| Army | 230,923 | 230,618 | 194,929 | 27,383 | 0 | 0 | 1,746 | 6,560 | 305 |
| Navy | 854,978 | 854,410 | 676,526 | 0 | 0 | 69 | 33 | 177,782 | 568 |
| Air Force | 262,016 | 261,836 | 248,564 | 0 | 0 | 0 | 0 | 13,272 | 180 |
| Other DOD | 139,815 | 139,564 | 100,587 | 30,500 | 0 | 0 | 0 | 8,477 | 251 |
| Department of Education | 5,533,995 | 275,351 | 67,044 | 1,346 | 0 | 23,391 | 83,055 | 100,515 | 5,258,644 |
| Department of Energy | 565,518 | 561,108 | 444,499 | 115,525 | 0 | 939 | 0 | 145 | 4,410 |
| Environmental Protection Agency | 85,817 | 85,817 | 77,503 | 0 | 0 | 8,314 | 0 | 0 | 0 |
| Department of Health & Human Services | 5,204,634 | 4,916,250 | 4,512,022 | 22,017 | 0 | 256,209 | 109,491 | 16,511 | 288,384 |
| National Institutes of Health | 4,377,304 | 4,377,304 | 4,002,889 | 22,017 | 0 | 226,396 | 109,491 | 16,511 | 0 |
| Health Resources and Services Administration | 256,148 | 9,477 | 8,155 | 0 | 0 | 1,322 | 0 | 0 | 246,671 |
| Alcohol, Drug Abuse, and Mental Health Administration | 459,148 | 438,762 | 415,110 | 0 | 0 | 23,652 | 0 | 0 | 20,386 |
| Centers for Disease Control | 39,656 | 22,281 | 22,281 | 0 | 0 | 0 | 0 | 0 | 17,375 |
| Food and Drug Administration | 8,445 | 8,445 | 8,445 | 0 | 0 | 0 | 0 | 0 | 0 |
| Office of Human Development Services | 19,653 | 19,653 | 15,984 | 0 | 0 | 3,669 | 0 | 0 | 0 |
| Health Care Financing Administration | 14,343 | 14,343 | 14,343 | 0 | 0 | 0 | 0 | 0 | 0 |
| Social Security Administration | 3,653 | 3,653 | 3,653 | 0 | 0 | 0 | 0 | 0 | 0 |
| Office of the Assistant Secretary for Health | 22,819 | 18,867 | 17,697 | 0 | 0 | 1,170 | 0 | 0 | 3,952 |
| Other DHHS | 3,465 | 3,465 | 3,465 | 0 | 0 | 0 | 0 | 0 | 0 |
| Department of Housing and Urban Development | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| Department of the Interior | 67,759 | 56,160 | 52,828 | 0 | 0 | 0 | 3,332 | 0 | 11,599 |
| Agency for International Development | 65,309 | 65,309 | 65,309 | 0 | 0 | 0 | 0 | 0 | 0 |
| Department of Labor | 9,227 | 6,514 | 6,499 | 0 | 0 | 15 | 0 | 0 | 2,713 |
| National Aeronautics and Space Administration | 461,941 | 461,941 | 435,702 | 1,232 | 0 | 13,009 | 0 | 11,998 | 0 |
| National Science Foundation | 1,336,231 | 1,336,231 | 1,206,568 | 6,677 | 15,280 | 32,976 | 2,948 | 71,782 | 0 |
| Nuclear Regulatory Commission | 4,300 | 4,300 | 4,300 | 0 | 0 | 0 | 0 | 0 | 0 |
| Department of Transportation | 25,198 | 22,068 | 21,892 | 0 | 0 | 176 | 0 | 0 | 3,130 |

SOURCE: National Science Foundation/SRS, Federal Support to Universities, Colleges, and Nonprofit Institutions, Fiscal Year 1989

Table C-7. -- Federal obligations to the 100 universities and colleges receiving the largest amounts by type of activity: fiscal year 1989

[Dollars in thousands]

(Page 1 of 2)

| Rank | Institution (ranked by total federal obligations) | Total, all activities | Academic science/engineering: Total academic science/engineering | Research and development | R&D plant | Facilities for instruction in science/eng. | Fellowships, traineeships, and training grants | General support science/engineering | Other science/engineering | Non-science/engineering |
|---|---|---|---|---|---|---|---|---|---|---|
| | Total, all institutions | 15,657,609 | 10,073,144 | 8,516,849 | 237,010 | 16,911 | 340,985 | 200,605 | 760,784 | 5,584,465 |
| 1 | Johns Hopkins University | 612,128 | 604,567 | 411,879 | 2,031 | 0 | 11,372 | 2,498 | 176,787 | 7,561 |
| 2 | Stanford University | 275,781 | 265,282 | 239,847 | 9,233 | 0 | 13,715 | 789 | 1,698 | 10,499 |
| 3 | University of Washington | 246,883 | 222,126 | 203,691 | 952 | 0 | 10,351 | 3,442 | 3,690 | 24,757 |
| 4 | Mass Inst of Technology | 236,632 | 231,126 | 207,157 | 13,270 | 0 | 8,307 | 715 | 1,677 | 5,506 |
| 5 | University of Minnesota | 203,183 | 174,043 | 128,727 | 27,383 | 44 | 5,066 | 2,536 | 10,287 | 29,140 |
| 6 | Univ of Cal Los Angeles | 200,090 | 182,282 | 170,839 | 232 | 0 | 7,662 | 1,730 | 1,819 | 17,808 |
| 7 | University of Michigan | 198,199 | 182,243 | 167,865 | 1,156 | 199 | 10,607 | 1,922 | 494 | 15,956 |
| 8 | Cornell University | 192,077 | 181,492 | 139,954 | 2,877 | 0 | 6,200 | 1,483 | 30,978 | 10,585 |
| 9 | Univ of Cal San Diego | 184,633 | 176,478 | 166,601 | 1,167 | 0 | 3,876 | 1,789 | 45 | 8,155 |
| 10 | Univ of Wis-Madison | 178,913 | 171,168 | 150,474 | 1,726 | 7 | 6,277 | 1,977 | 10,707 | 7,745 |
| | Total 1st 10 institutions | 2,528,519 | 2,390,807 | 1,987,034 | 60,027 | 250 | 86,433 | 18,881 | 238,182 | 137,712 |
| 11 | Columbia Univ Main Div | 178,910 | 165,056 | 150,263 | 3,764 | 0 | 8,090 | 1,845 | 1,094 | 13,854 |
| 12 | Univ of Cal San Francisco | 177,273 | 171,384 | 159,027 | 944 | 0 | 9,236 | 1,464 | 713 | 5,889 |
| 13 | Howard University | 175,594 | 14,608 | 12,291 | 0 | 0 | 712 | 1,525 | 80 | 160,986 |
| 14 | Harvard University | 171,316 | 161,251 | 141,760 | 1,614 | 0 | 15,010 | 2,406 | 461 | 10,065 |
| 15 | Yale University | 168,338 | 162,017 | 146,245 | 1,309 | 0 | 10,668 | 2,533 | 1,262 | 6,321 |
| 16 | Pennsylvania State Univ | 166,581 | 135,092 | 119,435 | 351 | 0 | 1,484 | 1,123 | 12,699 | 31,489 |
| 17 | Univ of Cal Berkeley | 164,358 | 147,478 | 131,070 | 0 | 0 | 11,222 | 1,205 | 3,981 | 16,880 |
| 18 | Univ of Pennsylvania | 158,337 | 145,478 | 132,805 | 477 | 0 | 9,809 | 2,218 | 169 | 12,859 |
| 19 | Univ of Southern Cal | 134,061 | 118,775 | 114,766 | 0 | 0 | 2,500 | 1,242 | 267 | 15,286 |
| 20 | University of Colorado | 130,430 | 110,494 | 101,345 | 210 | 27 | 4,729 | 1,766 | 2,417 | 19,936 |
| | Total 1st 20 institutions | 4,153,717 | 3,722,440 | 3,196,041 | 68,696 | 277 | 159,893 | 36,208 | 261,325 | 431,277 |
| 21 | Duke University | 122,679 | 117,850 | 108,611 | 1,090 | 0 | 6,271 | 693 | 1,185 | 4,829 |
| 22 | Univ of Ill Urbana | 120,910 | 120,659 | 100,062 | 998 | 0 | 2,173 | 915 | 16,511 | 251 |
| 23 | Washington University | 120,764 | 115,160 | 102,974 | 354 | 0 | 8,964 | 2,419 | 449 | 5,604 |
| 24 | University of Pittsburgh | 114,798 | 98,353 | 91,094 | 617 | 0 | 2,900 | 1,560 | 2,182 | 16,445 |
| 25 | University of Rochester | 111,435 | 106,183 | 98,550 | 921 | 0 | 3,964 | 884 | 1,864 | 5,252 |
| 26 | Univ of NC at Chapel Hill | 105,873 | 99,357 | 93,244 | 0 | 0 | 5,226 | 788 | 99 | 6,516 |
| 27 | University of Chicago | 105,402 | 100,914 | 90,611 | 0 | 0 | 8,589 | 836 | 878 | 4,488 |
| 28 | Ohio State University | 105,318 | 86,055 | 72,702 | 30 | 0 | 1,153 | 593 | 11,577 | 19,263 |
| 29 | University of Arizona | 104,241 | 92,224 | 82,913 | 123 | 0 | 2,285 | 1,999 | 4,904 | 12,017 |
| 30 | New York University | 96,278 | 82,947 | 77,761 | 0 | 0 | 3,350 | 702 | 1,134 | 13,331 |
| | Total 1st 30 institutions | 5,261,415 | 4,742,142 | 4,114,563 | 72,829 | 277 | 204,768 | 47,597 | 302,108 | 519,273 |
| 31 | University of Iowa | 94,237 | 81,838 | 76,059 | 0 | 0 | 3,818 | 1,717 | 244 | 12,399 |
| 32 | Purdue University | 92,160 | 75,869 | 62,751 | 0 | 0 | 1,719 | 1,599 | 9,800 | 16,291 |
| 33 | University of Massachuset | 92,132 | 73,345 | 67,183 | 0 | 0 | 1,159 | 1,055 | 3,948 | 18,787 |
| 34 | Michigan State University | 87,914 | 69,762 | 54,382 | 1,465 | 0 | 1,614 | 1,224 | 11,077 | 18,152 |
| 35 | Univ of Texas at Austin | 87,717 | 87,432 | 84,619 | 0 | 0 | 1,520 | 1,027 | 266 | 285 |
| 36 | University of Florida | 85,812 | 70,706 | 58,696 | 582 | 0 | 2,006 | 1,488 | 7,934 | 15,106 |
| 37 | Univ Alabama Birmingham | 85,566 | 75,153 | 70,702 | 997 | 0 | 2,345 | 812 | 297 | 10,413 |
| 38 | Louisiana State Univ | 85,408 | 61,726 | 39,088 | 13,000 | 85 | 596 | 1,478 | 7,479 | 23,682 |
| 39 | University of Utah | 84,810 | 72,106 | 61,361 | 7,125 | 0 | 1,792 | 1,334 | 494 | 12,704 |
| 40 | Indiana University | 83,969 | 61,604 | 55,449 | 578 | 0 | 2,404 | 1,761 | 1,412 | 22,365 |
| | Total 1st 40 institutions | 6,141,140 | 5,471,683 | 4,744,853 | 96,576 | 362 | 223,741 | 61,092 | 345,059 | 669,457 |
| 41 | Case Western Reserve Univ | 79,997 | 74,430 | 69,589 | 0 | 0 | 4,205 | 636 | 0 | 5,567 |
| 42 | Univ of MD College Park | 78,765 | 70,824 | 60,252 | 300 | 0 | 1,249 | 771 | 8,252 | 7,941 |
| 43 | Texas A & M University | 77,655 | 65,052 | 44,928 | 1,852 | 0 | 1,302 | 426 | 16,544 | 12,603 |
| 44 | Yeshiva University | 77,490 | 75,132 | 68,553 | 844 | 0 | 4,358 | 1,374 | 3 | 2,358 |
| 45 | California Inst of Tech | 76,974 | 76,974 | 69,335 | 679 | 0 | 3,602 | 197 | 3,161 | 0 |
| 46 | Univ of Cal Davis | 76,787 | 64,271 | 60,100 | 938 | 0 | 1,945 | 831 | 457 | 12,516 |
| 47 | Georgia Institute of Tech | 76,724 | 72,639 | 60,949 | 0 | 63 | 717 | 239 | 10,671 | 4,085 |
| 48 | Boston University | 75,686 | 66,235 | 60,029 | 584 | 0 | 3,434 | 1,018 | 1,170 | 9,451 |
| 49 | University of Miami | 75,381 | 63,781 | 60,135 | 406 | 0 | 1,627 | 1,024 | 589 | 11,600 |
| 50 | Baylor Col of Medicine | 74,640 | 72,715 | 69,499 | 0 | 0 | 1,682 | 443 | 1,091 | 1,925 |
| | Total 1st 50 institutions | 6,911,239 | 6,173,736 | 5,368,222 | 102,179 | 425 | 247,862 | 68,051 | 386,997 | 737,503 |

(Continued)

Table C-7. -- Federal obligations to the 100 universities and colleges receiving the largest amounts by type of activity: fiscal year 1989

[Dollars in thousands]

(Page 2 of 2)

| Rank | Institution (ranked by total federal obligations) | Total, all activities | Academic science/engineering: Total academic science/engineering | Research and development | R&D plant | Facilities for instruction in science/eng. | Fellowships, traineeships, and training grants | General support science/engineering | Other science/engineering | Non-science/engineering |
|---|---|---|---|---|---|---|---|---|---|---|
| 51 | Vanderbilt University | 74,100 | 71,263 | 63,978 | 0 | 0 | 4,457 | 1,548 | 1,280 | 2,837 |
| 52 | Northwestern University | 72,694 | 64,214 | 57,494 | 902 | 0 | 2,497 | 1,234 | 2,087 | 8,480 |
| 53 | Woods Hole Ocngrphic Inst | 69,486 | 69,486 | 67,289 | 1,796 | 0 | 39 | 12 | 350 | 0 |
| 54 | University of Georgia | 64,993 | 59,715 | 45,627 | 1,198 | 0 | 623 | 892 | 11,375 | 5,278 |
| 55 | N C State Univ at Raleigh | 64,808 | 58,935 | 43,466 | 0 | 0 | 992 | 268 | 14,209 | 5,873 |
| 56 | Carnegie-Mellon Univ | 64,642 | 60,277 | 57,605 | 285 | 0 | 1,028 | 199 | 1,160 | 4,365 |
| 57 | Oregon State University | 64,527 | 56,010 | 42,562 | 7,275 | 0 | 811 | 583 | 4,779 | 8,517 |
| 58 | University of Virginia | 63,319 | 57,292 | 51,990 | 63 | 0 | 3,806 | 1,217 | 216 | 6,027 |
| 59 | Univ of Hawaii-Manoa | 63,215 | 54,518 | 36,693 | 14,079 | 0 | 424 | 514 | 2,808 | 8,697 |
| 60 | University of Kentucky | 62,486 | 38,616 | 27,349 | 0 | 25 | 428 | 595 | 10,219 | 23,870 |
| Total 1st 60 institutions | | 7,575,509 | 6,764,062 | 5,862,275 | 127,777 | 450 | 262,967 | 75,113 | 435,480 | 811,447 |
| 61 | Utah State University | 61,506 | 50,735 | 43,219 | 0 | 0 | 81 | 1,184 | 6,251 | 10,771 |
| 62 | Univ of Ill Chicago | 61,391 | 46,266 | 43,271 | 0 | 0 | 849 | 1,186 | 960 | 15,125 |
| 63 | Rutgers the St Univ of NJ | 61,238 | 44,705 | 36,241 | 243 | 79 | 1,952 | 636 | 5,554 | 16,533 |
| 64 | New Mexico State Univ | 58,424 | 50,372 | 44,210 | 0 | 0 | 349 | 683 | 5,130 | 8,052 |
| 65 | Univ of Cal Irvine | 57,791 | 50,199 | 47,303 | 105 | 0 | 1,443 | 1,304 | 44 | 7,592 |
| 66 | University of Cincinnati | 56,966 | 43,623 | 40,996 | 0 | 0 | 1,701 | 450 | 476 | 13,343 |
| 67 | Oregon Hlth Sciences Univ | 55,822 | 51,861 | 23,231 | 22,000 | 0 | 782 | 385 | 5,463 | 3,961 |
| 68 | Emory University | 55,671 | 48,030 | 45,840 | 888 | 0 | 531 | 771 | 0 | 7,641 |
| 69 | U Tex Sw Med Ctr - Dallas | 55,192 | 52,642 | 48,591 | 277 | 0 | 2,573 | 503 | 698 | 2,550 |
| 70 | Princeton University | 54,695 | 51,396 | 47,037 | 125 | 0 | 3,694 | 524 | 16 | 3,299 |
| Total 1st 70 institutions | | 8,154,205 | 7,253,891 | 6,282,214 | 151,415 | 529 | 276,922 | 82,739 | 460,072 | 900,314 |
| 71 | Iowa St U of Sci & Tech | 54,627 | 38,947 | 25,987 | 1,930 | 102 | 261 | 321 | 10,346 | 15,680 |
| 72 | Tulane University | 54,516 | 48,420 | 46,873 | 603 | 0 | 282 | 388 | 274 | 6,096 |
| 73 | Virginia Commonwlth Univ | 53,290 | 45,692 | 42,684 | 0 | 0 | 1,571 | 1,023 | 414 | 7,598 |
| 74 | University of Connecticut | 52,304 | 46,395 | 39,761 | 1,245 | 0 | 1,337 | 1,112 | 2,940 | 5,909 |
| 75 | Colorado State University | 51,652 | 42,523 | 36,120 | 0 | 0 | 1,703 | 622 | 4,078 | 9,129 |
| 76 | VA Polytech Inst & St U | 51,457 | 46,491 | 34,585 | 146 | 0 | 374 | 299 | 11,087 | 4,966 |
| 77 | Inter Am U Pr-San German | 51,225 | 499 | 27 | 0 | 31 | 0 | 325 | 116 | 50,726 |
| 78 | U P R - Regional Col Admn | 50,162 | 284 | 280 | 0 | 0 | 0 | 0 | 4 | 49,878 |
| 79 | Gallaudet University | 49,667 | 2,138 | 1,362 | 0 | 0 | 92 | 425 | 259 | 47,529 |
| 80 | Univ of Cal Santa Barbara | 49,645 | 41,978 | 37,444 | 247 | 0 | 400 | 1,519 | 2,368 | 7,667 |
| Total 1st 80 institutions | | 8,672,750 | 7,567,258 | 6,547,337 | 155,586 | 662 | 282,942 | 88,773 | 491,958 | 1,105,492 |
| 81 | SUNY at Stony Brook | 47,247 | 44,406 | 41,251 | 1,483 | 0 | 1,099 | 381 | 192 | 2,841 |
| 82 | Mt Sinai Sch of Medicine | 45,244 | 42,970 | 40,873 | 684 | 0 | 1,039 | 374 | 0 | 2,274 |
| 83 | University of New Mexico | 44,616 | 29,015 | 24,835 | 0 | 0 | 740 | 1,599 | 1,841 | 15,601 |
| 84 | SUNY at Buffalo All Cmps | 44,491 | 40,906 | 33,934 | 0 | 0 | 832 | 749 | 5,391 | 3,585 |
| 85 | Arizona State University | 44,389 | 29,062 | 17,719 | 10,000 | 0 | 479 | 324 | 540 | 15,327 |
| 86 | Univ of Missouri Columbia | 43,503 | 35,006 | 23,042 | 0 | 0 | 831 | 287 | 10,846 | 8,497 |
| 87 | Tufts University | 42,957 | 40,240 | 38,566 | 0 | 0 | 924 | 720 | 30 | 2,717 |
| 88 | Univ of VT & St Agric Col | 41,379 | 35,575 | 29,351 | 1,406 | 94 | 745 | 1,436 | 2,543 | 5,804 |
| 89 | Univ of MD Balt Prof Sch | 40,554 | 35,918 | 34,648 | 0 | 0 | 303 | 550 | 417 | 4,636 |
| 90 | Rochester Inst Technology | 40,318 | 2,038 | 1,635 | 0 | 388 | 15 | 0 | 0 | 38,280 |
| Total 1st 90 institutions | | 9,107,448 | 7,902,394 | 6,833,191 | 169,159 | 1,144 | 289,949 | 95,193 | 513,758 | 1,205,054 |
| 91 | Brown University | 40,250 | 35,604 | 33,000 | 310 | 0 | 1,125 | 318 | 851 | 4,646 |
| 92 | West Virginia University | 39,885 | 30,520 | 13,166 | 10,831 | 200 | 412 | 680 | 5,231 | 9,365 |
| 93 | Temple University | 39,562 | 24,730 | 22,929 | 0 | 0 | 807 | 724 | 270 | 14,832 |
| 94 | U Tennessee Knoxville | 39,557 | 31,733 | 19,229 | 118 | 32 | 408 | 535 | 11,411 | 7,824 |
| 95 | Wayne State University | 39,107 | 28,953 | 26,945 | 0 | 0 | 951 | 1,053 | 4 | 10,154 |
| 96 | Univ of Med & Dent of N J | 38,932 | 34,417 | 32,369 | 989 | 0 | 499 | 506 | 54 | 4,515 |
| 97 | University of Kansas | 37,118 | 28,133 | 23,380 | 0 | 0 | 1,542 | 1,444 | 1,767 | 8,985 |
| 98 | Washington State Univ | 37,068 | 28,153 | 19,172 | 3,303 | 0 | 382 | 421 | 4,875 | 8,915 |
| 99 | Oklahoma State University | 37,014 | 25,179 | 13,264 | 0 | 0 | 275 | 602 | 11,038 | 11,835 |
| 100 | Rockefeller University | 37,014 | 37,014 | 35,586 | 0 | 0 | 1,170 | 258 | 0 | 0 |
| Total 1st 100 institutions | | 9,492,955 | 8,206,830 | 7,072,231 | 184,710 | 1,376 | 297,520 | 101,734 | 549,259 | 1,286,125 |

SOURCE: National Science Foundation/SRS, Federal Support to Universities, Colleges, and Nonprofit Institutions, Fiscal Year 1989

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